INTERPERSONAL RELATIONS AND GROUP PROCESSES

The Role of Attachment in Responses to Victims of Life Crises

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Attachment effects on affect, cognitions, and behavior during an interaction with a confederate who purportedly had cancer and whose attachment orientation had been manipulated in a prior context were examined among 241 participants. Results supported theoretically derived predictions: Participant anxious attachment predicted anxiety, participant avoidant attachment predicted supportiveness, and participant avoidant attachment interacted with confederate avoidant attachment to predict rejection. Results suggest (a) the importance of attachment in predicting interpersonal responses in a nonromantic stressful context, (b) that anxious attachment is an important predictor of anxiety in a situation with implicit support demands, (c) that avoidant attachment is a potentially important predictor of the likelihood of supportive responses to victims, and (d) that attachment orientation can be successfully manipulated in experimental studies of attachment.

The caring and support received from family and friends can be extremely important in mitigating the negative psychological and physical effects of stressful life events (Cohen, 1988; House, Umberson, & Landis, 1988; Norris & Kaniasty, 1996). Unfortunately, it also appears that, for many victims of negative life events (e.g., cancer, spinal cord injury, or rape), the amount, nature, and timing of support received from family and friends do not always meet expectations (Coyne, Wortman, & Lehman, 1988; Dunkel-Schetter & Bennett, 1990; Lehman, Ellard, & Wortman, 1986). Being in the presence of one who has encountered a serious life event can be difficult and may arouse intense feelings of anxiety, helplessness, vulnerability, frustration, or guilt (Coates, Wortman,

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& Abbey, 1979; Dunkel-Schetter & Wortman, 1982). Experiencing these negative emotional states can lead some individuals to act unsupportively, such as by demonstrating discomfort, making unhelpful comments, or purposely avoiding the victim (Herbert & Dunkel-Schetter, 1992; Wortman & Lehman, 1985). Several empirical studies support this depiction of responses to victims (e.g., Bolger, Vinokur, Foster, & Ng, 1996; Lehman et al., 1986; Peters-Golden, 1982). For example, in one of the only experimental studies that involved an actual interaction, participants who met with a cancer patient for the first time exhibited significantly greater discomfort and avoidance and reported less desire for future interaction than participants who met with a healthy (control) individual (Silver, Wortman, & Crofton, 1990).

Of course, not all interpersonal exchanges with victims necessarily elicit apprehension and rejection. Some friends and family can be effective support providers (cf. Dakof & Taylor, 1990). Nonetheless, when desired social support is unavailable, victims of negative life events may look to others to fulfill unmet support needs, either in the context of support groups (Taylor, Falke, Mazel, & Hilsberg, 1988) or by forming relationships with previous strangers or acquaintances (cf. Silver & Urbanowicz, 2001). The nature of encounters between victims of negative life events and others has been hypothesized to be influenced by a number of factors, including type of prior relationship, individual characteristics unique to the victim, and individual characteristics unique to the provider (cf. DeGarmo & Forgatch, 1997; Dunkel-Schetter & Skokan, 1990; Herbert & Dunkel-Schetter, 1992).

Only a limited amount of research, however, has actually examined the role of provider and victim factors, and how they might interact, in determining responses to someone undergoing a serious stressor. Thus far, variables implicated are the victim's level of distress (Silver et al., 1990), the gender of the victim and provider (Trobst, Collins, & Embree, 1994; Yee, Greenberg, & Beach,

1998), the coping strategies a victim demonstrates (Schwarzer & Weiner, 1991; Yee et al., 1998), the provider's dispositional empathy (Trobst et al., 1994), and the provider's previous experience with stressors (Dunkel-Schetter & Skokan, 1990). Apart from interaction partners' dispositional empathy, virtually no studies have investigated the role of individual differences in interpersonally relevant dimensions that could influence responses to victims. Furthermore, none have examined how similarities or differences between a victim and his or her partner on the same interpersonally relevant dimensions might influence the nature of an exchange. Because attachment styles, as described in adult attachment theory, have been implicated in interpersonal responses to romantic partners as well as to peers, we hypothesized that attachment theory could provide a unifying framework for examining the role of interpersonal factors in interactions with victims.

Attachment Theory

Attachment theory originated from Bowlby's extensive observations of young children's reactions to separations from attachment figures. His observations led him to propose that an attachment system evolved among humans to increase the survivability of the species. The goal of the attachment system is to maintain infants' proximity to the caretaker and is activated during stressful or threatening circumstances, that is, when the care and protection of a caretaker are needed most (Bowlby, 1969, 1973, 1980). An important extension to the theory was provided by data documenting that caregivers' responsivity to infants' distress signals predicted fairly distinct patterns of infant behavioral reactions after separations and reunions with the caregiver (Ainsworth, Blehar, Waters, & Wall, 1978). The notion of working or mental models of attachment was advanced to account for these findings. Mental models were conceptualized in terms of beliefs held by the developing child regarding (a) the extent to which attachment figures are accessible and responsive (image of others) and (b) whether he or she is the sort of person to whom others would want to respond (image of self). Differences in the negativity-positivity of mental models of self and others were posited to account for the behavior of secure, anxious-ambivalent, and avoidant infants during separations, reunions, and play.

Bowlby (1973), and later Bretherton (1985) and Main and her colleagues (Main, 1991; Main, Kaplan, & Cassidy, 1985), proposed that mental models of self and others, as shaped by attachment experiences, are internalized and continue to influence personality and behavior throughout the life span. Continuity in representational models is suggested in the work of Hazan and Shaver (1987) and others. In their pioneering study, Hazan and Shaver (1987) noted similarities between the infant-caretaker attachment bond and adult romantic attachments, which led them to develop a measure of self-report adult attachment styles analogous to the three main styles described in infant attachment research. Their measure reflected mental models or representations of relationships that characterize secure, anxious—ambivalent, and avoidant adults.

Bartholomew (1990) extended Hazan and Shaver's (1987) work and incorporated Bowlby's account of mental models of self and others by creating a four-category model of attachment based on a cross tabulation of the positivity and negativity of models of self with the positivity and negativity of models of others. Secure individuals have positive views of themselves and others because

their early attachment experiences were characterized by warm, consistently responsive caregiving. Preoccupied individuals are identified by a negative model of self but a positive model of others (analogous to the "ambivalent" or "anxious—ambivalent" style described by other researchers). Dismissing—avoidant individuals have negative models of others but maintain a positive model of self by defensively denying the importance of attachments. Fearful—avoidant individuals maintain a negative view of others, avoid intimacy out of fear of rejection, and are low in self-worth.

Bartholomew and colleagues, using a variety of existing self-report attachment items and measures, demonstrated that models of self and others provide the structural basis for their four attachment prototypes (Bartholomew & Horowitz, 1991; Griffin & Bartholomew, 1994). Furthermore, Griffin and Bartholomew (1994) linked their dimensions of self and others with the two basic attachment dimensions that other researchers have found to underlie most attachment measures: avoidance of closeness in relationships (or, conversely, comfort with closeness) and anxiety over relationships (e.g., Brennan, Clark, & Shaver, 1998). Griffin and Bartholomew (1994) demonstrated that the positivity of self model, to a large degree, reflects the anxious attachment dimension, whereas the positivity of others model reflects the avoidant attachment dimension.

Adult Attachment and Supportive Responses

The relationship between adult attachment and support has been studied primarily in the context of romantic relationships, as romantic partners typically assume the role of attachment figures, for example, by providing a safe haven and emotional support during stressful or threatening situations. Attachment theorists have postulated that caregiving, like care seeking, is an integral, although not overlapping, part of the attachment system (e.g., Kunce & Shaver, 1994; Shaver, Hazan, & Bradshaw, 1988). As stated by Simpson, Rholes, and Nelligan (1992), relationship experiences during infancy, childhood, and adolescence give rise to "mental models" of both self and others "that influence patterns of supportproximity seeking and support giving [italics added] in adult relationships" (p. 434). Similarly, Kunce and Shaver (1994) noted that "in containing both 'self' and 'other' aspects, working models are thought to represent both sides of attachment relationships: careseeking and caregiving" (p. 212).

The view that attachment and caregiving processes are related has been demonstrated in several studies. Kunce and Shaver (1994) found that, in comparison with securely attached individuals, more avoidant individuals reported lower levels of proximity and sensitivity in response to the support needs of romantic partners and that preoccupied individuals exhibited more compulsive caregiving. In a study of married couples, Feeney (1996) found that comfort with closeness (secure attachment) predicted responsiveness to partners' need for support, whereas anxious attachment in wives was associated more strongly with compulsive rather than responsive care. In addition, in an experimental study of support giving, Simpson et al. (1992) found that as female partners' anxiety increased in anticipation of an experimental stressor, the level of support provided by avoidant men decreased. Simpson and colleagues (Simpson, Rholes, & Phillips, 1996) also found that more avoidant men were rated as generally less warm toward and supportive of their partners during discussion of a major problem. In a study of airport separations, highly avoidant women were less likely to both seek and maintain contact with partners and less likely to seek or provide care and support (Fraley & Shaver, 1998). In summary, a consistent finding across these studies is that location on the secure—avoidant dimension (i.e., comfort or discomfort with closeness) predicted responsiveness to a romantic partner's support needs.

In the present study, we sought to examine the role of attachment in explaining supportiveness toward a nonintimate individual who implicitly demonstrates strong support needs. Such a demonstration would extend the importance of attachment beyond the domain of romantic relationships. We hypothesized that because interacting with a victimized individual both is anxiety provoking and implicitly creates a situation justifying supportive responses, working models of self and others, arising from experiences with attachment figures, should predict the nature of responses toward the victim. Specifically, we hypothesized that the positive model of self and others held by more securely attached individuals would predict greater self-confidence and, thus, more supportive behaviors. In contrast, the negative model of self held by more anxiously attached individuals should lead to anxiety in the situation. Moreover, the negative model of others resulting from deficient care-receiving experiences among more avoidantly attached individuals should lead to decreased supportiveness.

We acknowledge that previous theory and research regarding caregiving describe caregiving and activation of the attachment system as occurring only in the context of relationships with attachment figures. An additional tenet of attachment theory is that the experience of stress or distress is required to activate the attachment system, with anxious attachment being associated with a lower threshold for activation (Bartholomew, Cobb, & Poole, 1997; Simpson & Rholes, 1994). We argue, however, that the relationship between caregiving and attachment should be evident in certain situations, such as interpersonal exchanges involving victims of negative events. Our reason for making this proposal resides in the fact that one of the most reliable responses of individuals who interact with victims, at least initially, is anxiety (cf. Coates et al., 1979; Wortman & Lehman, 1985). In fact, the anxiety victims arouse in others can be so intense that it is often noticeable by victims and can make them feel further alienated and unsupported (Lehman et al., 1986). We hypothesize that the anxiety-provoking nature of an interpersonal exchange with a victim, coupled with the implicit support demands created by the interaction, is likely to activate attachment-related schemas and influence the likelihood of supportive responses during the interaction.

The basis for our prediction is Collins and Read's (1994) conceptualization of the structure of working models and how they influence behavior. In this conceptualization, adult representations of attachment are viewed as a network of interconnected models, with a default model at the top in which general representations of the self and other people are based on attachment histories with caretakers and peers. According to Collins and Read's perspective, the models that are activated and influence behavior in a given situation with a particular person depend on their strength and accessibility, features of the situation, and the extent to which the situation matches situations on which the models were built. We posit that the simple presence of a victim is likely to elicit thoughts about the victim's need for close relationships and need to depend on others. Research by Lehman et al. (1986) suggests that many

people understand that individuals who have recently experienced severe life crises have an increased need for closeness and for warm, supportive interactions with others. Thus, simply being confronted with a victim may activate, through associative networks, one's own memories, attitudes, and expectations that involve relating to someone with strong needs for closeness and dependence (cf. Baldwin, Keelan, Fehr, Enns, & Koh-Rangarajoo, 1996). Seeing a victim might also activate working models relevant to rejection in relationships. For example, seeing a disabled person confined to a wheelchair might elicit thoughts about how much rejection he or she might have experienced as a consequence of the disability (Jones et al., 1984). People might also think about their likelihood of rejection were they to be similarly afflicted. With the activation of attachment-relevant thoughts and memories. interacting with a victim should produce attachment effects in interpersonal responses. Thus, interaction with a victim of a stressful life event represents a compelling situation in which attachment effects on interpersonal behavior should be evident.

Theory and findings reported by Mikulincer and colleagues on how attachment orientation is associated with coping with stressful events provide a framework for predicting specific behavioral responses to interacting with a victim. According to Mikulincer and Florian (1998), the negative self models of anxiously attached persons should lead to appraisals of helplessness, uncontrollability, and an inability to cope during stress. This passive coping with stressors should lead to heightened distress, negative thoughts about the situation, and an inward focus on one's distress (Mikulincer & Florian, 1998). For avoidantly attached persons, however, activation of attachment-related mental models during stress should lead to suppression of attachment needs and to demonstrations of high levels of self-reliance. In contrast to these patterns of response, secure individuals' positive models of self and others should provide "inner resources" that help them manage stressors while maintaining a sense of optimism, control, and self-efficacy. Support for these hypotheses was provided by Mikulincer, Florian, and Weller (1993), who found that during the Persian Gulf war, avoidant individuals in Israel engaged in distancing strategies and minimized reports of distress, secure individuals were more likely to seek social support and were less distressed, and anxiousambivalent persons showed the highest levels of emotional distress.

Translated to the context of interacting with a victim, negative self models associated with anxious attachment should predict greater uncertainty about how to cope with the situation, heightened anxiety during the encounter, and an inward focus on one's own anxiety. In contrast, models of others (as reflected in an avoidance of closeness or comfort with closeness dimension) should be associated with the degree of supportiveness extended to a victim. Specifically, more negative models of others should lead to discomfort and a desire to distance oneself from the situation so as to minimize the distress associated with the encounter. This would result in unsupportive responses. In contrast, greater positivity of models of others, or greater security of attachment, should predict higher levels of supportiveness as a result of greater optimism, self-efficacy, and perceptions of control over the situation.

The Role of Victim Attachment

As noted earlier, a limited amount of research has explored how specific characteristics of a victim of negative life events influence the quantity and quality of support received. In fact, research by Silver et al. (1990) has demonstrated that certain characteristics (e.g., a victim's coping portrayal) can influence the degree of rejection exhibited by interaction partners. Extrapolating to the attachment domain, we hypothesized that whether a victim conveys comfort or discomfort with closeness might influence the amount of rejection interaction partners exhibit toward the victim. For example, victims who say that they are uncomfortable with closeness may violate societal expectations that they would need close supportive relationships because of their condition (Dembo, Leviton, & Wright, 1956; Wright, 1983). In behavioral terms, such a violation of normative beliefs might lead to greater rejection of a perceived avoidant victim and less rejection of a victim perceived as willing to be supported.

The degree of rejection demonstrated toward a victim of negative life events, however, might also depend on the attachment orientation of the potential support provider. For example, a victim who indicates a particularly strong desire for closeness and dependence may exacerbate the discomfort of an avoidant interaction partner. In contrast, a victim perceived as similarly avoidant may elicit less rejection. In fact, a victim who states a similar desire for independence and avoidance of intimacy may seem less threatening. Moreover, less avoidant partners might be more rejecting of a perceived avoidant victim. In general, we would expect that encountering a victim with a matching avoidant or anxious attachment style might reduce the likelihood of negative responses and that a mismatch between attachment styles might intensify feelings of rejection. This would be consistent with a body of research suggesting that perceived similarity in attitudes promotes liking (Byrne, 1997). We thus hypothesized that perceived victim avoidance or anxiety over relationships, in interaction with model of self (anxiety over relationships) or model of others (avoidance of closeness), would influence the degree of rejection interaction partners exhibit toward a victim.

Overview of the Study

In the present study, we assessed the impact of participants' attachment styles on the degree of anxiety, supportiveness, and rejection they exhibited when meeting a peer who purportedly had been diagnosed recently with cancer. Unlike almost all previous studies on initial reactions to nonintimate victims, the present study involved a real individual (rather than vignettes) and observation of participants' reactions. Female participants were first interviewed about their background, significant life events, and relationships and subsequently completed selfreport measures of attachment. They then listened to a similar but previously tape-recorded interview in which a peer (confederate) also answered questions about her background, significant life events, and relationships. In her answers to questions about relationships, the confederate's attachment style was manipulated, and in the recording she conveyed characteristics of one of four attachment styles. In response to a question, asked in the last part of the interview, about negative life events, she revealed her recent diagnosis of cancer. Shortly thereafter, the participant and confederate met for approximately 10 min. This experimental paradigm was modeled after a previous study that demonstrated that a cancer patient's

coping predicts interaction partners' supportiveness (Silver et al., 1990).

We sought to test the applicability of adult attachment theory to the victimization literature and to obtain support for expanding the scope of attachment theory beyond romantic relationships to a situation that involved interacting for the first time with a purported victim. Our overarching hypothesis was that the attachment style of both a perceived victim and an interaction partner provider would predict the partner's demonstration of supportiveness, anxiety, and rejection. More specifically, our hypotheses were as follows.

Hypothesis 1

The positivity of participants' model of self (or anxiety over relationships) would predict anxious and self-critical responses in an interaction with a perceived victim.

Hypothesis 2

The positivity of participants' model of others (or avoidance of close relationships) would predict the supportiveness exhibited toward a perceived victim.

Hypothesis 3

Perceived victim attachment, in combination with participant attachment, would influence the degree of rejection exhibited toward a perceived victim. In addition to our expectation that participants would be more rejecting of a perceived avoidant confederate, we also hypothesized that the extent to which the attachment style of the victim matched that of the interaction partner would influence the degree of rejection exhibited toward her.

Method

Participants

Two hundred forty-seven female undergraduate students from the University of California, Irvine, participant pool received course credit for taking part in this study. We recruited only women to maximize the statistical power of our analyses and because women are more often providers of emotional support to other women and to men (Gilligan, 1982; Miller, 1976). Moreover, we wanted to maximize the external validity of our procedures, and, in the real world, self-disclosure is more likely to occur for female and same-sex interaction partners than for opposite-sex or male partners (Derlega, Metts, Petronio, & Margulis, 1993; Dindia & Allen, 1992). During debriefing, 3 participants indicated that they did not believe our cover story and were dropped from the analyses. Three additional participants were dropped because of missing data on the self-report attachment style measures, resulting in a sample of 241 participants.

Ninety-five percent of participants were between 17 and 24 years of age (M=20). Participants were 51% Asian American, 34% non-Hispanic White, and 7% Hispanic. The remainder were African American (3%), did not indicate their ethnicity (3%), or were of mixed ethnicity (2%). The numbers of participants who listened to the secure, preoccupied, fearful, and dismissing confederate interviews were 58, 61, 60, and 62, respectively.

¹ Technical difficulties with the video recording equipment precluded coding of verbal and nonverbal behavior for 14 participants. Means for these variables, however, were substituted. The pattern of results did not change with the substitution.

Procedure

This study was conducted over the course of an academic year. Using a procedure adapted from Silver et al. (1990), we told participants that the study was designed to investigate the role of first impressions in the acquaintanceship process. Each participant was told that she and a fellow student (confederate) would be interviewed separately and privately, that the interviews would be taped, and that, subsequently, each would listen to the other's interview and then meet for several minutes. Participants were informed that the encounter would be videotaped and that the videotapes would later be reviewed by the experimenters. To minimize the potential for gender effects, the confederate was also female.

The interview administered to the participant followed the same format as the confederate interview that participants heard subsequently. In the first part, the experimenter asked specific questions about home city, family, and academic major. The second section asked a series of questions about relationships that were relevant to attachment (e.g., "How easy is it for you to get emotionally close to people?"). In the final section, the participant was asked to discuss an important negative life event she had experienced. After being interviewed, the participant completed attachment measures and then listened to one of four prerecorded confederate interviews. These interviews were selected according to a prearranged randomized schedule by a second experimenter unaware of interview content.

After listening to the confederate tape, the participant completed measures that assessed reactions indicative of anxiety, supportiveness—warmth, and rejection of the confederate. Thereafter, the participant and confederate were introduced in a second room and left alone together for approximately 10 min. After the interaction, the participant completed the same measures. The confederate separately completed measures assessing participants' anxiety and supportiveness toward her.

During the encounter a third experimenter, who was unaware of all hypotheses, experimental conditions, and participants' attachment, videotaped the interaction through a one-way mirror using a camera, a video recorder, an amplifier, and a microphone that ran between rooms. This experimenter rated the participant on the same scales used by the confederate and also debriefed the participant. Videotapes of the interaction were subsequently coded for participants' behavioral responses (both verbal and nonverbal) by observers who were unaware of experimental conditions and participants' attachment.

One confederate was used throughout the study. She was an attractive Caucasian woman with blond hair and blue eyes, of average height and approximately 24 years old. She was unaware of all hypotheses and participants' attachment ratings because she did not listen to participants' interviews. She was also unaware of the condition to which she was assigned (i.e., she did not know what attachment style participants thought she had). Before the meeting, the first experimenter briefed the confederate on the participant's interview responses to questions about her background (e.g., academic major). The confederate was instructed to behave as normally as possible during her meeting with the participant.

Construction of Victim Tapes

In the first section of the tape, the confederate answered questions about her hometown, academic major, and so forth. In the middle section was our manipulation of victim attachment, which was guided by Bartholomew's (1990) model. In response to questions about relationships, the secure confederate revealed on the tape that she found it easy to become close to others and that she was comfortable depending on and trusting others. The preoccupied confederate (corresponding to the anxious or anxious—ambivalent style described by other researchers) responded that she found it very easy to become close to others and to depend on others, but she expressed doubts about how much others really cared for her. The fearful confederate indicated discomfort with becoming close and with trusting and depending on others because of her concerns about being disappointed or hurt in relationships. The dismissing confederate's responses were identical to the fearful confederate's except that any expressions of being

hurt in relationships were omitted. Lengths of scripts differed from each other by, at most, two sentences. In constructing our scripts, we interviewed, in a pilot study, approximately 25 students about their close relationships. Pilot testing of the final tapes with approximately 10 additional participants indicated that the four confederate interviews and our cover story were credible.

In the final section of the tapes, the confederate revealed that she had recently been diagnosed with Hodgkin's disease, which she pointed out was a type of cancer. She vividly described the sequence of events and symptoms leading up to her diagnosis (e.g., prolonged coughing and night sweats), as well as the potential effects of her future chemotherapy treatments (e.g., vomiting and loss of hair). The recording for this section, like that for the first, was spliced onto all four tapes. That is, each of the four confederate tapes was identical except for the middle section, in which the confederate portrayed one of four attachment orientations.²

Measures

Participant Attachment

We wanted our participant attachment indices to benefit from both self-reported and observer-reported ratings. We thus factor analyzed self-reported attachment dimensions, themselves obtained through factor analysis (described subsequently), and observer-reported attachment dimensions, also obtained through factor analysis (described subsequently). This final factor analysis resulted in two continuous factors that we labeled Participant Avoidance of Closeness and Participant Anxiety Over Relationships. As described later, our final Participant Anxiety Over Relationships dimension was constructed with self-report measures, whereas our final Participant Avoidance of Closeness dimension combined both participant-reported and observer-reported attachment ratings.

Self-reported attachment dimensions. Participants completed the Hazan and Shaver (1987) Romantic Attachment Questionnaire (RAQ), which consists of three paragraphs describing experiences and behavior in romantic relationships that parallel the secure, anxious—ambivalent, and avoidant infant attachment styles reported by Ainsworth et al. (1978). Participants also completed the Bartholomew and Horowitz (1991) Relationship Questionnaire (RQ), which is a modification and extension of the Hazan and Shaver measure. The RQ splits avoidant attachment into two avoidant styles, fearful or dismissing, and relabels the anxious—ambivalent style as "preoccupied." The paragraphs on the RQ thus describe secure, preoccupied, fearful, and dismissing attachment styles. Participants rated each paragraph from the RAQ and the RQ on a 7-point scale ranging from not at all like me (1) to very much like me (7).

We subjected the seven continuous self-rated participant attachment ratings to a factor analysis using principal-components factoring with varimax rotation. The resulting factors and pattern of factor loadings were highly similar to those reported by Brennan, Shaver, and Tobey (1991). We obtained two factors with eigenvalues greater than one that accounted for 64.6% of the overall variance. The first factor accounted for 40.4% of the variance, and items that loaded high on this factor were the avoidant (.82), fearful (.83), and two secure items (-.87 and -.81). The remaining three loadings were below .30. After reversal of the secure items, the four high-loading items formed a reliable measure ($\alpha = .85$). Raw scores for these items were averaged to form a continuous measure representing

² It is possible that some participants may have believed Hodgkin's disease was contagious, thereby affecting their subjective and behavioral responses. On the other hand, in the confederate tapes that participants heard, the confederate explicitly stated that Hodgkin's disease was a type of cancer. In addition, the confederate never indicated, either in the interview or during the interaction with participants, that her disease was contagious. Furthermore, none of the participants mentioned in their thought listings that they believed or wondered whether Hodgkin's disease was contagious.

self-reported avoidance of closeness.³ The second factor accounted for 24.2% of the variance. The anxious-ambivalent (.85) and the preoccupied (.82) items loaded highest on this factor; the other items loaded below .45. The first two items were reliable ($\alpha=.75$) and were thus averaged to form a composite continuous index representing self-reported anxiety over relationships (or anxious attachment). The two self-reported attachment dimensions that we obtained were consistent with Brennan, Clark, and Shaver's (1998) conclusion that avoidance and anxiety underlie most self-report measures of adult attachment.

Observer-reported attachment dimensions. Two research assistants (observers) rated, on Likert scales, the extent to which participants' interview responses were indicative of each of the attachment styles described in the Hazan and Shaver (1987) measure (avoidant, anxious-ambivalent, and secure) and in the Bartholomew and Horowitz (1991) measure (secure, preoccupied, fearful, and dismissing). Observers' ratings on the anxiousambivalent and preoccupied scales suffered from a floor effect, so ratings from these scales were dropped from further analysis. The remaining items were subjected to a factor analysis with principal-components factoring. Agreement between raters was demonstrated by the factor solution. Two factors (eigenvalues above 1) that accounted for 71.8% of the total variance were obtained. Both factors appeared to assess avoidance in relationships. Loading on the first factor, which we labeled Fearful Avoidance (58.5% of variance), were ratings on the "fearful" scale (.82 and .77 for the first and second coders, respectively), ratings on the "avoidant" scale (.73 and .85 for the first and second coders), and ratings on the Hazan and Shaver (1987) "secure" scale (-.72 and -.66 for the first and second coders). These items (from both raters) were subjected to a reliability analysis. As a result of high reliability ($\alpha = .89$), raw items were averaged to create a continuous composite index of fearful avoidance.

Both raters' codings on the "dismissing" item (.85 and .88 for the first and second coders, respectively) and the Bartholomew and Horowitz (1991) secure items (-.61 for both coders) loaded highly on the second factor, which we labeled Dismissing Avoidance. After reversal of secure ratings, items (from both raters) were subjected to a reliability analysis ($\alpha = .85$), and raw scores were averaged to create a continuous index of observer-rated dismissing avoidance.⁴

Combined self-reports and observer reports of participant attachment. Both participant-reported and observer-reported attachment factors were treated as items in a subsequent and final factor analysis (using varimax rotation) that produced two factors. Loading on the first factor (which accounted for 51.2% of variance) were self-reported avoidance of closeness (.75) and the two observer-rated avoidance items (.92 for fearful and .83 for dismissing). These items formed a reliable scale ($\alpha = .75$) and were thus averaged to form a continuous composite index labeled Participant Avoidance of Closeness. The second factor (which accounted for 26% of variance) consisted of the single self-reported Participant Anxiety Over Relationships factor (loading of .97).

Perceived Confederate Attachment

To depict our four attachment styles in analyses parsimoniously, we used Griffin and Bartholomew's (1994) characterization of attachment styles as reducible to two dimensions: positive–negative model of others (or low–high avoidance of closeness in relationships) and positive–negative model of self (or low–high anxiety over relationships). We thus created two dichotomous indicator variables. The first was perceived confederate avoidance of closeness, in which the fearful and dismissing confederate conditions were coded 1 (high avoidance) and the secure and preoccupied confederate conditions were coded 0 (low avoidance). For the second variable, perceived confederate anxiety over relationships, the preoccupied and fearful confederate conditions were coded 1 (high anxiety over relationships) and the secure and dismissing confederate conditions were coded 0 (low anxiety over relationships).

Participant Reactions

Thought listing. Both before and after meeting the confederate, participants completed a thought-listing measure (Cacioppo & Petty, 1981) that asked them to list their current thoughts. Two research assistants, who were unaware of the study's hypotheses, the participant's attachment, and the confederate's perceived attachment, analyzed preinteraction thought listings for the first 50 participants and created 18 categories of thoughts. These 18 categories provided the template for coding the remaining participants. Raters were asked to decide which of 18 types of thoughts a particular thought represented. Percentage agreement between raters was good (83%).

Two different research assistants analyzed the postinteraction thought listings for the first 40 participants and created three categories of thoughts. These categories were then used to code thought listings for the remaining participants. For all participants, interrater agreement between coders was good (Cohen's $\kappa > .70$). Eight of the preinteraction and postinteraction thought-listing categories pertained to anxiety, supportiveness—warmth, and rejection. The other categories were used in exploratory analyses not reported here.

Before and after the encounter with the confederate, participants also completed (a) the Affects Balance Scale (Derogatis, 1975), which consists of eight subscales assessing current affect (Anxiety, Depression, Guilt, Hostility, Joy, Contentment, Vigor, and Affection); (b) a 20-item checklist (Campbell & Fehr, 1990) of feelings and behavior (e.g., warm, nervous, and considerate); and (c) an 8-item measure of supportiveness—warmth and rejection taken from Silver et al. (1990) that assesses emotional and behavioral responses to a victim (e.g., "If this person needed assistance I would likely provide it to her"). The 5-point scale for all items ranged from 1 (not at all) to 5 (very much). Relevant items from these measures and the thought listings were selected to represent participants' self-reports of anxiety, supportiveness—warmth, and rejection of the confederate, and they are described subsequently.

Anxiety. Participants' reports of their anxiety before meeting the confederate were measured by 10 items, and their reports after meeting the confederate were measured by 9 items (e.g., nervous, anxious, and thoughts of uncertainty). Preinteraction anxiety items were significantly correlated with postinteraction anxiety items. In addition, when pooled, the items formed a reliable 19-item measure ($\alpha=.82$). We thus averaged the raw preinteraction and postinteraction anxiety items to form a single measure of participant-reported anxiety. One dichotomous item from the thought

 $^{^3}$ When raw scores were converted to z scores and averaged to obtain composite measures of all of the independent and dependent variables in this study, results were identical. All results reported herein involved the composites of raw scores.

⁴ It should be noted that our interview-based measure of participant attachment is a different observer measure of attachment than that used by Main and colleagues. In the Adult Attachment Interview (AAI), used by these researchers (George, Kaplan, & Main, 1985), participants are rated on the coherence of their replies to a set of questions focusing on such areas as memories of parental interactions. The AAI requires extensive training for proper administration, the interview is much longer than that scored in the present study, and the focus of the interviewer's questions is different.

⁵ Cohen's kappa accounts for the likelihood of chance agreement and is therefore more appropriate when the number of categories used is small.

⁶ An alternative method of analysis is to compute separate preinteraction and postinteraction indexes for each category of response (anxiety, supportiveness-warmth, and rejection) and to then conduct multivariate analyses of covariance with these indexes as the dependent variables for each particular category. This procedure resulted in findings almost identical to those of the current analysis, which is more parsimonious to report and describe.

listing also assessed whether participants experienced any self-critical thoughts about the interaction.

Supportiveness—warmth. Participants' report of their supportiveness—warmth before the interaction consisted of 15 items (e.g., desire to help confederate and feelings of affection). The same items, though fewer, assessed supportiveness—warmth after the interaction. Preinteraction and postinteraction items assessing supportiveness—warmth were significantly correlated. In addition, when pooled, the items formed a single reliable 26-item measure ($\alpha=.89$). We thus averaged the raw preinteraction and postinteraction supportiveness—warmth items to form a single measure of participant-reported supportiveness—warmth.

Rejection. Self-reported rejection of the confederate before the interaction consisted of 7 items (e.g., "I would not feel at ease introducing this person as a friend of mine"). Rejection after meeting the confederate consisted of the same items along with a reverse-coded item assessing desire for future interaction with the confederate. When pooled, preinteraction and postinteraction rejection variables formed a reliable 14-item measure ($\alpha = .82$). We thus averaged the raw preinteraction and postinteraction rejection items to form a single measure of participant-reported rejection.

Ratings by Direct Observers

The confederate and the experimenter who observed the actual interaction through the one-way mirror completed identical items that assessed participants' anxiety and supportiveness—warmth. The anxiety item asked how awkward or uneasy the participant appeared to be during the interaction ($\alpha=.57$ between raters), and the supportiveness—warmth item required a rating of the participant's overall supportiveness ($\alpha=.76$). Items were rated on a scale ranging from 1 (not at all) to 5 (very much). Observers' raw scores for each item were averaged to create a summary index for anxiety and supportiveness—warmth.

Verbal Raters

Two trained independent coders, who were unaware of participant and confederate attachment, rated participants using the audio portion of the videotapes of the interaction. Verbal raters rated participants' anxiety using a single 5-point scale ranging from not at all (1) to very much (5). Raters used two similar scales to assess supportiveness—warmth. One item specifically tapped supportiveness (i.e., helpfulness), and the other item tapped warmth (i.e., how warm and friendly the participant appeared to be). To assess rejection, verbal raters noted the degree to which the participant discussed the confederate's cancer condition in an inappropriate or rejecting manner (e.g., relating a story in which a coworker died of cancer). Raters' agreement rates (alpha coefficients) for anxiety, warmth, supportiveness, and rejection were .76, .69, .57, and .70, respectively. Thus, raters' raw scores for each index were averaged and used in analyses.

Physical Behavior Raters

Two different independent raters coded participants' nonverbal behavior on dimensions pertaining to anxiety, supportiveness—warmth, and rejection. These raters were unaware of hypotheses and participant and confederate attachment. Raters' evaluations were based on watching the videotaped interaction with the sound turned off.

Raters assessed anxiety by counting the number of nervous behaviors exhibited per minute (e.g., playing with hair or nail biting), summing scores from the 1-min segments, and taking the average (by dividing by number of segments). Raters also completed an overall subjective rating of anxiety at the end of the interaction that was based on nonverbal behavior during the interaction. The scale for this index ranged from 1 (not at all) to 5 (very much). Rates of agreement between raters (alpha coefficients)

were .70 for overall anxiety and .87 for number of nervous behaviors. We averaged raters' final scores for use in the analyses.

To assess supportiveness—warmth, raters coded each 1-min segment of the interaction for amount of smiling and for expressiveness on similar Likert scales. To assess rejection, raters coded participants' avoidance of eye contact with the confederate on a similar scale. For each rater, we summed scores from the 1-min segments and took the average (by dividing by number of segments) to achieve final smiling, expressiveness, and rejection scores. Interrater agreement rates were .77 for smiling, .86 for expressiveness, and .72 for rejection. We averaged raters' final scores for use in the analyses.

Results

Manipulation Check

Because the manipulation of partner's perceived attachment was a novel and crucial aspect of this study, extensive data were collected to verify that our manipulation worked as intended. Manipulation check data consisted of participants' ratings of the following variables (after listening to the confederate interview): confederate's (a) comfort with emotional closeness, (b) comfort depending on other people, (c) likelihood of questioning how much others care about or value her, (d) overall level of coping, (e) comfort with receiving support, (f) concern about rejection, (g) worry about being disappointed in relationships, (h) similarity to the participant's personality, and (i) lifetime stress. The first five variables each consisted of two items, which were averaged to create a single score for each variable. The other variables were single-item measures.

These dependent variables were entered simultaneously into a 2 (low vs. high perceived confederate avoidance) \times 2 (low vs. high perceived confederate anxiety over relationships) multivariate analysis of covariance (MANCOVA). The Participant Avoidance of Closeness and Participant Anxiety Over Relationships factors served as covariates in the model. Results indicated significant main effects of perceived confederate avoidance of closeness and perceived confederate anxiety over relationships, as well as significant interactions.

Results revealed that the manipulation was successful. As can be seen in Table 1, the confederate in the high avoidant conditions (fearful and dismissing) was evaluated as being significantly less comfortable with emotional closeness, less willing to depend on others, less likely to doubt how much others cared for her, and less comfortable receiving support from others than the confederate in the low avoidant conditions. Participants also perceived themselves to be less similar to the confederate in the high avoidant conditions. Furthermore, the confederate in the high avoidant conditions was rated as coping somewhat less well. Because of this result, we controlled for perceived level of coping in evaluating our hypotheses.

Main effects for perceived confederate anxiety (over relationships) were also obtained. Importantly, participants rated the confederate in the conditions involving high anxious attachment (fearful and preoccupied) as significantly more likely to have doubts about how much others care for her, as more concerned about rejection, and as more worried about being disappointed in relationships than the confederate in the conditions involving low anxious attachment (secure and dismissing). For these same dependent variables, however, significant interactions between per-

Table 1
Means and Multivariate Analysis of Covariance Results Indicating Relationship of Confederate (Perceived) Attachment Style to Manipulation Check Dependent Variables (N = 241)

Attachment style	Pillais <i>F</i> (9, 227)	Variable							
		Closeness	Dependency	Doubts	Coping	Support	Rejection	Worry	Similarity
Avoidance of closeness	79.96, p = .0001								
Univariate F		472.69****	446.59****	62.71****	4.37*	271.03****	9.33**	0.58	7.69**
Low		4.09	3.82	3.44	3.40	3.99	2.72	2.95	3.08
High		2.36	2.15	2.64	3.19	2.82	2.30	3.05	2.78
Anxiety over relationships	4.75, p = .0001								
Univariate F	**	3.66†	11.93***	24.06****	0.07	6.65*	26.19****	4.97*	1.57
Low		3.15	2.85	2.79	3.28	3.31	2.16	2.86	2.86
High		3.30	3.12	3.29	3.31	3.49	2.86	3.14	3.00
Avoidance × Anxiety	3.00, p = .002								
Univariate F		0.13	1.67	20.89****	0.20	0.47	19.82****	5.50*	0.00
Secure $(n = 58)$		4.00	3.64	2.96	3.41	3.87	2.07	2.66	3.03
Preoccupied $(n = 61)$		4.18	4.01	3.92	3.39	4.10	3.38	3.24	3.14
Dismissing $(n = 62)$		2.29	2.06	2.63	3.16	2.75	2.26	3.06	2.69
Fearful $(n = 60)$		2.42	2.23	2.66	3.23	2.89	2.35	3.04	2.85

 $[\]dagger p = .06. * p < .05. ** p < .01. *** p < .001. **** p < .001.$

ceived confederate avoidance of closeness and perceived confederate anxiety over relationships were obtained. Inspection of means and comparison contrasts indicated that the "preoccupied" confederate, in comparison with the confederate in the other attachment conditions, was rated as more likely to doubt how much others cared about or valued her, t(237) = 10.12, p < .0001, as more concerned about being rejected by others, t(237) = 7.40, p < .0001, and as more worried about being disappointed in relationships, t(237) = 2.06, p < .04. We also conducted comparison contrasts to determine whether participants viewed the two perceived avoidant confederates ("fearful" and "dismissing") differently. None of these comparisons were significant (p > .10), however.

Results of our manipulation also indicated that the stress level of the confederate was not significantly different across conditions. Over all conditions, the confederate received, on average, a stress score of 4.2 on a 5-point scale, indicating that participants viewed her illness as quite serious. Participants' thought listings also conveyed a view of the confederate's illness as serious. Examples of thoughts listed were "She has been dealt quite a blow," "Her disease sounds awful," "It must be a lot for her to deal with," "It makes me realize how precious life is," "I feel uncomfortable because I realize how lucky I am to be healthy," and "I am glad that I don't have to go through what she does; I feel very fortunate."

Analytic Strategy

Using the CANCORR and MANOVA programs in SPSS, we conducted three separate analyses for each category of dependent variables. We first computed canonical correlation coefficients between canonical variate scores for the set of independent variables and the set of dependent variables under consideration (anxiety, supportiveness—warmth, and rejection). The specific variables used in each analysis are described in more detail subsequently. Canonical correlations were examined only for the first canonical

function because this function maximizes the correlation between linear combinations of the set of independent variables and the set of dependent variables. If a significant canonical correlation was obtained, linear regressions were conducted to examine the effects of our continuous independent variables (participant anxiety over relationships and participant avoidance of closeness) on each of the dependent variables representing the outcome of interest (anxiety, supportiveness-warmth, or rejection). These regressions controlled for perceived level of coping. We used canonical correlational analysis because measures composing each category of participant reactions were intercorrelated, with the exception of rejection measures. For example, the multiple assessments of anxiety, if considered as items, would form a reliable scale ($\alpha =$.57). Similarly, support-warmth variables were intercorrelated $(\alpha = .66)$. Rejection variables, however, were not reliably related. The reason may be in part that three different sources provided only one assessment of rejection based on very different criteria. That is, nonverbal raters assessed avoidance of eye contact, verbal raters assessed inappropriate conversational statements, and participants reported their desire to maintain distance from the confederate.

To illustrate the interrelationships among our three categories of participant responses, we created composite variables for each category by averaging the z scores of the dependent variables composing the category. The anxiety composite was negatively related to the support—warmth composite (r = -.40) and positively related to the rejection composite (r = .34). The support—warmth and rejection composites were negatively correlated (r = -.61); all ps < .01.

Significant effects were tested for interactions with the two largest ethnic groups in the sample, Asian Americans and non-Hispanic Whites. As a means of addressing the possibility that the confederate may have become more experienced with time and therefore affected the pattern of results, analyses reported subsequently were reconducted controlling for sequence. The pattern and significance of results achieved in

these reanalyses were identical to those of the original analyses, except where indicated.⁷

Hypothesis 1: Participant Anxiety Over Relationships and Anxious Reactions

The canonical correlation between our set of independent variables (participant attachment and perceived confederate attachment) and the set of variables indicating participant anxiety was significant, R = .37, $\chi^2(25, N = 241) = 46.83$, p < .0001. Each dependent variable assessing anxiety was regressed on the Participant Anxiety Over Relationships and Participant Avoidance of Closeness factors, with perceived coping as a covariate. These analyses indicated that self-reported anxiety was positively related to both participants' anxiety over relationships, $\beta = .33$, t = 5.34, p < .0001, and participants' avoidance of closeness, $\beta = .18$, t = 2.90, p < .004. The beta coefficient for the relation between participants' anxiety over relationships and self-reported anxiety, however, was almost two times the magnitude of that for the relation between participants' avoidance of closeness and self-reported anxiety.

A logistic regression model with self-criticism as the dependent variable was marginally significant, $\chi^2(4, N=240)=8.76$, p<.07, but the univariate test between participants' anxiety over relationships and self-criticism was significant (p<.02). In line with predictions, each one-unit increase in participants' anxiety over relationships was associated with a more than 50% increase in the odds that participants criticized themselves in regard to how they acted during the interaction.

Hypothesis 2: Participant Avoidance of Closeness and Supportiveness-Warmth

The canonical correlation between our independent variables (participant attachment and perceived confederate attachment) and the set of dependent variables indicating participant supportiveness—warmth was significant, R=.37, $\chi^2(30, N=241)=56.22$, p<.0001. Each dependent variable assessing supportiveness—warmth was regressed on the Participant Anxiety Over Relationships and Participant Avoidance of Closeness factors, with perceived level of coping as a covariate. These analyses indicated that participant avoidance of closeness was negatively related to verbal supportiveness, $\beta=-.16$, t=2.50, p<.01; nonverbal supportiveness, $\beta=-.16$, t=2.53, p<.01; and self-reported warmth–supportiveness, $\beta=-.23$, t=3.72, t

Hypothesis 3: Rejection and the Role of Victim Attachment

The canonical correlation between our independent variables (participant attachment and perceived confederate attachment) and the set of dependent variables indicating participant reactions of rejection was significant, R = .36, $\chi^2(15) = 45.39$, p < .0001. Each dependent variable assessing rejection was regressed on the Participant Anxiety Over Relationships and Participant Avoidance of Closeness factors, with perceived coping as a covariate. These analyses indicated a positive relationship between participants' avoidance of closeness and verbal rejection, $\beta = .15$, t = 2.29, p < .000

.03. A MANCOVA that evaluated the effects of perceived confederate attachment, controlling for perceived coping, revealed a multivariate main effect of perceived confederate avoidance of closeness, Pillais F(3, 233) = 8.18, p < .0001, with significant univariate results for participant avoidance of eye contact (p < .05) and self-reported rejection (p < .0001). Examination of means for these variables indicated that participants were more rejecting of a perceived avoidant confederate ($\eta^2 = .02$ vs. .08).

A MANCOVA examined the significance of each of the two hypothesized interactions (Participant Anxiety Over Relationships × Perceived Confederate Anxiety Over Relationships and Participant Avoidance of Closeness × Perceived Confederate Avoidance of Closeness) on the set of rejection variables. This analysis indicated a significant Participant Avoidance of Closeness × Perceived Confederate Avoidance of Closeness interaction, Pillais F(3, 235) = 3.63, p < .01. A significant univariate effect was obtained for self-reported rejection ($\eta^2 = .04$, p < .002). To explicate the significant interaction, we plotted the relationship between participants' avoidance of closeness and participantreported rejection for the avoidant and nonavoidant confederate manipulations. As shown in Figure 1, less avoidant participants were more rejecting of the perceived avoidant confederate. Moreover, greater participant avoidance of closeness predicted decreasing levels of rejection if the confederate was perceived as similarly avoidant (b = -.11) but increasing levels of rejection if the confederate was perceived as nonavoidant (b = .10). Analyses confirmed that this effect was not due to curvilinearity between participant avoidance and rejection. 10

Discussion

In the present study, we attempted to establish a theoretical framework for understanding initial behavioral responses to a victim of a negative life event. In addition, by using attachment theory to establish this framework, we wanted to expand the range of influence of attachment to contexts outside of romantic relationships. Unlike previous studies in which participants reported how they would respond to a hypothetical victim (e.g., Dunkel-Schetter & Skokan, 1990; Trobst et al., 1994), this study examined

⁷ To address the reliability of results, we reconducted all analyses using only self-reported attachment dimensions. Unlike the analysis to be reported, however, participant avoidance of closeness in these reanalyses did not incorporate the observer-reported scores for participant avoidance (we noted earlier that there was no observer-reported measure of participant anxiety over relationships). The pattern of results in these analyses replicated that reported in the text, except where noted, suggesting a good degree of consistency.

⁸ This latter effect was not obtained in the analysis that controlled for confederate experience.

⁹ The univariate effect for nonverbal support did not achieve significance in reanalyses using only self-reported attachment indexes. When we used observer-reported participant avoidance of closeness as the index for participant avoidance, however, the results obtained were identical to those reported in the text.

 $^{^{10}}$ In reanalyses for rejection that used only self-reported attachment dimensions, the multivariate main effect of perceived confederate avoidance of closeness approached significance (p < .08), and the univariate effect for self-reported rejection was significant (p < .01). The interaction between participant avoidance and perceived level of victim avoidance was no longer significant.

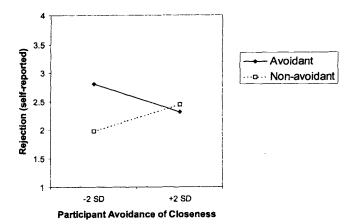


Figure 1. Interaction between participant avoidance of closeness and confederate perceived avoidant attachment in predicting self-reported rejection of confederate.

participants' verbal, nonverbal, and emotional reactions in an encounter with someone they believed was experiencing a serious illness. Because both provider and recipient factors have been shown to influence responses to victims, we assessed participant attachment and manipulated the perceived attachment of the victim (a confederate). We hypothesized that (a) participant anxiety over relationships would predict anxious reactions, (b) participant avoidance of closeness would predict the supportiveness of responses, and (c) rejection would differ as a function of perceived confederate attachment in combination with participant attachment. These hypotheses were largely supported.

Anxiety Over Relationships and Anxious Reactions

Participant anxiety about relationships was a strong predictor of participant-reported anxiety. Unexpectedly, participant avoidance of closeness also predicted participant-reported anxiety. This effect was not as robust as the effect for participant anxiety over relationships, however. No significant effects of participant anxiety over relationships on observer-rated anxiety were obtained, but the reason may have been that subtle verbal and nonverbal instances of anxiety and other behaviors are more difficult to detect and code (Dunkel-Schetter & Bennett, 1990). Also, greater participant anxiety over relationships predicted greater self-criticism about the interaction with the confederate.

Overall, our results suggest that in coping with a nonromantic relationship stressor (e.g., meeting a victim), anxiety over relationships appears to be more relevant than avoidance of closeness in predicting negative self-evaluations and distress. This is consistent with research linking anxious attachment to low self-esteem and negative self-models. It is also consistent with the position advanced by attachment theory that more anxiously attached individuals are overcome by negative thoughts and feelings and react with heightened distress in response to stressors (Bartholomew et al., 1997; Mikulincer, 1995; Mikulincer & Florian, 1998). This manner of reacting to stress is attributed to caregivers' unstable and unsatisfactory regulation of anxiously attached infants' distress, a pattern that hinders the development of mental models that promote effective regulation of emotions. The role of anxious attachment in responses to victims should be studied further,

because anxiety in interaction partners is regarded by victimized individuals as a negative feature of their interpersonal exchanges (Lehman et al., 1986). An investigation of other variables that might reduce anxiously attached individuals' anxiety in such situations would also be useful.

Avoidance of Closeness and Supportiveness-Warmth

In line with our predictions, we found that supportive responses, as assessed by both verbal and nonverbal coders and reported by participants themselves, were predicted only by participant avoidance of closeness. This result is consistent with previous research showing decreasing levels of support provision by more avoidant men as their female partners' anxiety increased in anticipation of an experimental stressor (Simpson et al., 1992). Our results are also consistent with Simpson et al.'s (1996) finding that avoidant attachment, rather than ambivalent attachment, predicts warmth and supportiveness toward romantic partners, especially during discussion of a major problem. Our results, however, demonstrate that avoidant attachment may be relevant to interactions other than those solely between romantic partners. Specifically, our results suggest that avoidant attachment (model of others), rather than anxious attachment (model of self), is a potentially important dimension in predicting the supportiveness of responses to an individual undergoing a life crisis. Given the results obtained in a relatively brief meeting with a stranger, future research should continue to explore the role of avoidance in ongoing caregiving relationships in which individuals are expected to provide longterm assistance to a close friend or relative with a chronic or deteriorating condition. We hypothesize that victimized or distressed individuals would be more likely to receive effective support from more securely attached network members (or less avoidant members) than from more avoidantly attached members (see, e.g., Crispi, Schiaffino, & Berman, 1997). In fact, a recent study of attachment and caregiving for dementia patients supports our proposition; results indicated that family members who scored higher on avoidance were more likely to institutionalize dependents with dementia (Markiewicz, Reis, & Gold, 1997).

Rejection and the Role of Victim Attachment

Participants were more rejecting, according to nonverbal raters and self-reports, of a perceived avoidant victim (fearful or dismissing) than a victim perceived to be nonavoidant (secure or preoccupied). Given that the perceived avoidant confederate indicated discomfort with closeness, participants may have simply reacted to the confederate's preference by withholding supportive and warmth-inducing behaviors. The degree of participants' rejection, however, was also partially determined by participants' own attachment, as we had expected. Specifically, participant avoidance of closeness interacted with perceived confederate avoidance to predict self-reported rejection. The interaction suggested that the least avoidant participants tended to feel more rejecting of a perceived avoidant confederate. Moreover, greater participant avoidance predicted greater rejection of the perceived nonavoidant confederate (i.e., secure or preoccupied) and less rejection of the perceived avoidant confederate (i.e., fearful or dismissing). In the present situation, more avoidant participants' desire to avoid the triggering of painful attachment-relevant memories may have resulted in the tendency to feel greater rejection toward the perceived secure or preoccupied victims. Main and others (Main et al., 1985; van Ijzendoorn, 1995) have theorized that infants' distress signals are incompatible with avoidant parents' dismissal of painful attachment-relevant childhood memories. This leads to dismissing (avoidant) parents ignoring or inhibiting their infants' signals for comfort or support, thereby transmitting their attachment orientation to their infants. Of course, application of this interpretation to our findings should be considered tentative, and future research should seek to replicate this interaction and explore mechanisms underlying it.

Methodological Issues

Because the success of our study hinged on an effective manipulation of victim attachment, we conducted extensive manipulation check analyses. Results indicated that our manipulation was successful; participants evaluated the confederate in the various conditions as being different on several key variables that are consistent with attachment theory and research (for correlates of attachment dimensions, see Collins & Read, 1990; Florian, Mikulincer, & Bucholtz, 1995; Shaver & Hazan, 1993). The strongest distinctions were between the perceived avoidant (fearful and dismissing) and nonavoidant (secure and preoccupied) confederates. Specifically, participants who listened to the confederate in the avoidant conditions perceived her as being less comfortable with emotional closeness, less likely to depend on others, less likely to question how much others cared for her, less comfortable receiving support from others, and less worried about rejection by others than participants who listened to the confederate in the secure or preoccupied conditions. The confederate was not perceived as appreciably different in the fearful and dismissing conditions, however.

Our manipulation of the "preoccupied" confederate was also successful, in that the confederate received higher ratings in this condition than in the others on concern about rejection by others, worry about being disappointed in relationships, and questioning how much others cared about her. Overall, although the four confederate attachment tapes resulted in effects consistent with expectations, the manipulation of perceived confederate avoidance appeared to be stronger than that for perceived confederate anxiety over relationships. This is suggested by the greater number of significant effects obtained for the former dimension on manipulation check variables. The stronger delineation between perceived avoidant and nonavoidant confederates may explain why the main and interaction effects of perceived confederate attachment were obtained only for perceived confederate avoidance of closeness. Nevertheless, the general success of our experimental manipulation of victim attachment suggests that our paradigm could be used in future studies in which there is a desire to observe interpersonal reactions to others who vary on attachment dimensions.

The present study is also unique in that we examined participants' affective as well as behavioral responses. Furthermore, participants' reactions were based on both self-reported data and observers' ratings of actual behavior. In addition, our analyses used a measure of participant avoidance of closeness that combined self-reported and observer-reported assessments. These self-reported and observer-reported measures converged considerably, strengthening the validity of our final measure of participant avoidance.

The composition of our sample also enabled us to test the generalizability of our results across two ethnic groups. This is an important feature of our study given that previous studies of attachment have involved primarily Anglo, North American, or Israeli samples. In this study, slightly more than half of the sample was Asian American, with non-Hispanic Whites constituting the second largest group. There were no significant interactions between attachment and ethnicity, suggesting that the role of attachment in interpersonal dynamics may extend to other cultural groups.

Conceptual Issues

By examining the role of attachment in responses to an ostensible victim, the present study has broadened the study of attachment in several respects. First, we have moved the study of attachment out of the realm of romantic relationship functioning into that of feelings and behavior between strangers, albeit in a circumscribed situation. Although the interaction occurred between strangers, it was in a situation that created implicit demands for support and one that is typically stressful for most people. Indeed, participants' thought listings suggest that it was quite stressful. The following are examples of thought listings before the interaction with the confederate: "This is really an uncomfortable situation. I don't really like it"; "I feel apprehensive about meeting the other person"; "I feel sad and sympathetic toward her because of what she said about being diagnosed with a form of cancer"; and "I wanted to cry when I heard about her problem. I think life is so unfair."

The thought listings also illustrated that having to meet the confederate was a situation involving implicit support demands. Meeting the confederate one on one, immediately after hearing about her cancer diagnosis, undoubtedly left the impression that she was someone who could reasonably benefit from a supportive exchange, even if such a request was not made explicitly. Had the situational context been one that explicitly pulled for support, we might have obtained even stronger effects. The results we obtained appear to support Collins and Read's (1994) position that an interconnected network of models of attachment can influence behavior with different individuals. This perspective suggests that current situations matching those on which working models of attachment were built can result in activation of attachment-related schemas and memories that guide care-seeking and caregiving behavior.

Having to interact with a victim may have also activated the attachment system because participants were confronted with the specter of a same-sex, same-age peer's mortality. Such an interaction was likely to have made the threat of one's own mortality more salient. Mikulincer and colleagues' research suggests that fear of death threatens felt security and results in attachment-patterned responses to cope with that fear (Mikulincer & Florian, 1988; Mikulincer, Florian, & Tolmacz, 1990). Whether provocation of anxiety and implicit support demands (alone or together) or the saliency of one's mortality is responsible for activation of attachment models could be determined by additional research examining responses to strangers with varying support needs. Such studies may also motivate researchers to identify other situations in which attachment effects on caregiving behavior might be found (e.g., therapeutic relationships or doctor-patient relationships). Additional research can thus help to determine whether attachment orientations can be viewed as general representations of self and others that are applicable to all interpersonal situations or whether there are limits to the ability of attachment working models to explain interpersonal responses among strangers and others. The finding that situations with unique characteristics produce the strongest effects of attachment will provide further support for Collins and Read's (1994) conceptual approach.

We have also moved the study of attachment and support giving into the domain of same-sex interactions. Simpson et al. (1992) examined men's caregiving to female romantic partners. Data from Tidwell, Reis, and Shaver (1996) suggested that attachment effects in social interactions are to be found primarily when interaction partners are of the opposite sex. Our study, however, was the first to produce evidence that women's supportiveness toward samesex interaction partners is a function of attachment. Results demonstrated that, at least in the specific context we studied, attachment is relevant to understanding responses in same-sex dyads. This should encourage researchers to use attachment theory to understand individual variability in women's caregiving outside of the romantic arena more fully (cf. Kessler, McLeod, & Wethington, 1985). Doing so may be especially fruitful because women are more often providers of emotional support to both women and men (Gilligan, 1982; Miller, 1976) and have wider and more intimate social networks (Turner, 1994). Of course, one limitation of the present study is that only female participants were included. Future research should explore these issues with mixed-gender and maleonly dyads.

Because the present study did not include other personality measures, we could not test whether our effects of attachment dimensions would be obtained over and above the effects of general personality dimensions such as trait anxiety or self-esteem. For these dimensions to operate as stand-ins for attachment dimensions, however, they would have had to demonstrate a similar pattern of associations with our dependent variables. For example, if avoidance of closeness was redundant with self-esteem in the present study, then it would be necessary to understand why self-esteem predicts supportive but not anxious responses. Even if general personality measures play a role in the attachment effects observed, an attachment framework provides a coherent conceptual framework for interpreting the pattern of results we obtained.

Conclusion

This study has contributed to the victimization literature by exploring and finding evidence for the applicability of attachment theory in explaining reactions to a victim who has encountered a negative life event. The study has also contributed to the adult attachment literature by shifting the study of attachment from adult romantic relationships to an interpersonal situation involving strangers. There is, however, much work that remains to be done in understanding why those suffering traumatic events are treated in less than satisfactory ways by outsiders. Results from the current study suggest that attachment theory may aid in understanding these responses, in that both victim and interaction partner attachment played a role in the reactions demonstrated. It is our hope that future research in this domain will lead to interventions that can promote supportive responses to victims of negative life events and can mitigate the negative responses that those experiencing life crises can encounter.

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